## **CLAIMS**

## What is claimed is:

- 1. An assay for detection of CD30 or CD30-L in a sample, comprising contacting the sample with a substantially homogeneous purified CD30-L polypeptide capable of binding CD30, wherein said CD30-L polypeptide is encoded by a DNA sequence that will hybridize to the nucleotide sequence presented in SEQ ID NO:19 or SEQ ID NO:23 under severely stringent conditions, and detecting binding of the sample thereto.
  - 2. The assay of claim 1 which is a competitive binding assay.
- 3. The assay of claim 2, in which the CD30-L polypeptide is conjugated to a detectable moiety and used to detect binding of the sample to intact cells expressing cell surface CD30.
- 4. The assay of claim 3, in the detectable moiety is selected from the group consisting of radionuclides, chromophores, an enzyme that can catalyze a colorometric reaction, an enzyme that can catalyze a fluorometric reaction, biotin, and avidin.
- 5. The assay of claim 2, in which the CD30-L polypeptide is conjugated to a detectable moiety and used to detect binding of the sample to a CD30 polypeptide bound to a solid phase.
- 6. The assay of claim 5, in the detectable moiety is selected from the group consisting of radionuclides, chromophores, an enzyme that can catalyze a colorometric reaction, an enzyme that can catalyze a fluorometric reaction, biotin, and avidin.

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7. An assay to detect cells expressing CD30 in a sample, comprising contacting the sample with a substantially homogeneous purified CD30-L polypeptide capable of binding CD30, wherein said CD30-L polypeptide is encoded by a DNA sequence that will hybridize to the nucleotide sequence presented in SEQ ID NO:19

or SEQ ID NO:23 under severely stringent conditions, and detecting binding of the CD30-L polypeptide the cells.

8. The assay of claim 7, wherein the CD30-L polypeptide is conjugated to a detectable moiety selected from the group consisting of radionuclides, chromophores, an enzyme that can catalyze a colorometric reaction, an enzyme that can catalyze a fluorometric reaction, biotin, and avidin.

9. An assay to detect soluble CD30 in a sample, comprising contacting the sample with a substantially homogeneous purified CD30-L polypeptide capable of binding CD30, wherein said CD30-L polypeptide is encoded by a DNA sequence that will hybridize to the nucleotide sequence presented in SEQ ID NO:19 or SEQ ID NO:23 under severely stringent conditions, and detecting binding of the CD30-L polypeptide to the soluble CD30.

- 10. The assay of claim 9, wherein the CD30-L polypeptide is conjugated to a detectable moiety selected from the group consisting of radionuclides, chromophores, an enzyme that can catalyze a colorometric reaction, an enzyme that can catalyze a fluorometric reaction, biotin, and avidin.
- 11. An assay for detection of CD30-L in a sample, comprising contacting the sample with an antibody immunoreactive with a CD30-L polypeptide encoded by a DNA sequence that will hybridize to the nucleotide sequence presented in SEQ ID NO:19 or SEQ ID NO:23 under severely stringent conditions, and detecting binding of the antibody to the CD30-L.
  - 12. The assay of claim 11 wherein the CD30-L is present on cells.
  - 13. The assay of claim 12, wherein the antibody is a monoclonal antibody.